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# ***Simplicity***®

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## **OWNER'S MANUAL**

38" LAWN REVITALIZER  
MFG. NO. 688

***Simplicity***  
AN ALLIS-CHALMERS COMPANY



SER. FORM - 177853  
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## SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

### PROTECT YOURSELF AND OTHERS

1. Read and be familiar with the owners manual for your tractor and the owners manual for the revitalizer before operating the revitalizer.
2. Do not allow anyone to use the revitalizer unless they have been instructed in how to operate it safely.
3. Never attempt to adjust, repair or service the revitalizer while the tractor engine is running.
4. Do not allow others near the revitalizer when it is operating.
5. Stay clear of the drive belt, revitalizer knives and other moving parts when the tractor engine is running.

### SIMPLICITY'S NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (45 days for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE. The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and in no event shall the Company be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

#### Required Accessories

1 - Rear Lift Kit Mfg. No. 690 for 1971 Tractors, Mfg. No. 642 for 1970 Tractors.

#### Recommended Accessories

Power Lift Mfg. No. 658 for 1971 Tractor Mfg. No. 468 for tractors prior to 1971, or front counter weight No. 223 for tractor will reduce lifting effort.

## INSTALLATION

**CAUTION: DO NOT ATTEMPT TO INSTALL OR WORK ON THE REVITALIZER WHEN THE TRACTOR ENGINE IS RUNNING.**

1. Position the revitalizer behind the tractor.
2. (See figure 1) Slide the idler arm assembly onto the left end of the rear lift shaft. Attach the lower end of the idler arm assembly to the hitch member with a pin and spring clip.

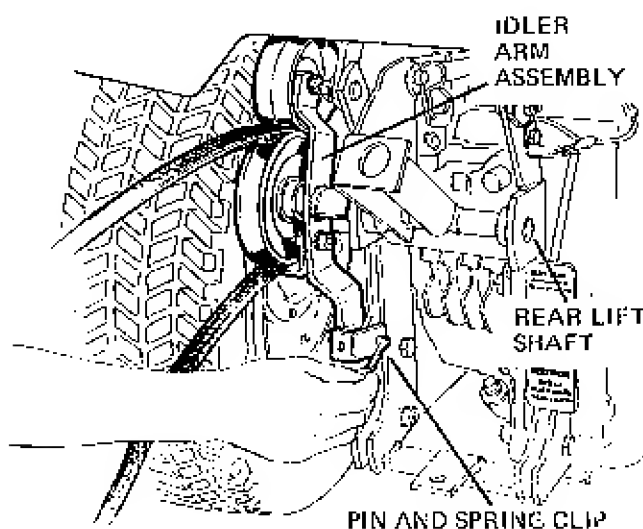


FIGURE 1

3. (See figure 2) Lower the tractor lift unit and place the revitalizer lift bar assembly into the tube of the tractor rear lift assembly. Placing a thin film of oil on the lift bar will make it

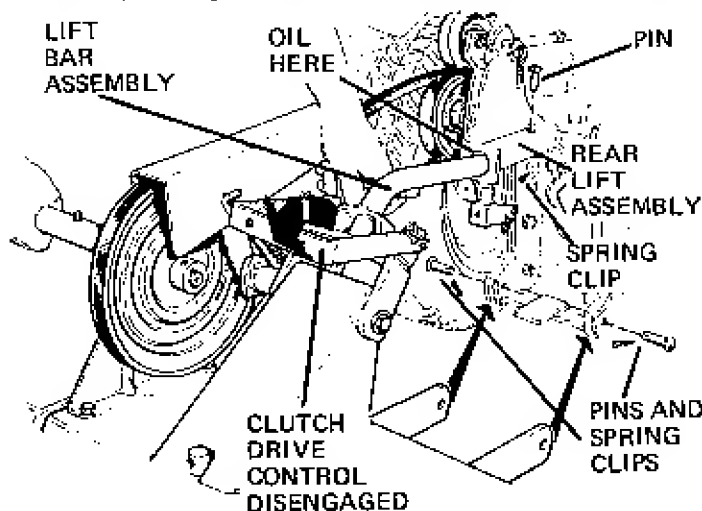


FIGURE 2

slide in place more easily. Fasten the lift bar in place with the pin and spring clip provided.

4. (See figure 3) Move the tractor lift to the raised position. Connect the revitalizer frame assembly to the tractor with 2 pins and spring clips.

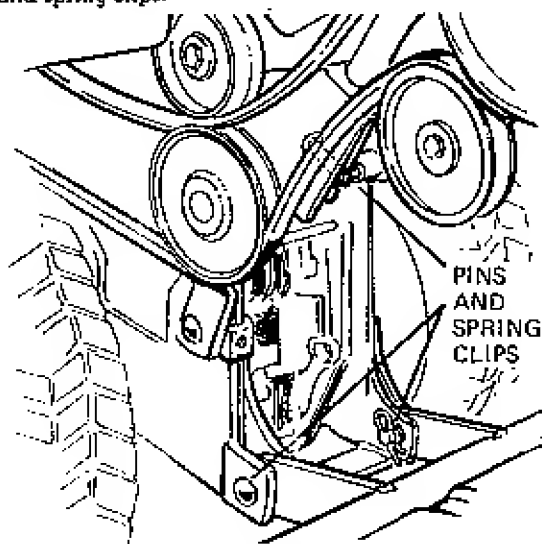


FIGURE 3

5. (See figure 2) Insure that the revitalizer drive clutch is pushed all the way back in the disengaged position.

6. (See figure 4) Install the revitalizer drive belt over the rear power-take-off pulley of the tractor. If this pulley and the belt guide shown in figure 4 have not been previously installed for use with the revitalizer or rotary tiller, see item (7) and figure (12) of belt replacement in the Maintenance section of this manual for proper positioning.

NOTE: CLEARANCE BETWEEN PULLEY AND BELT GUARD

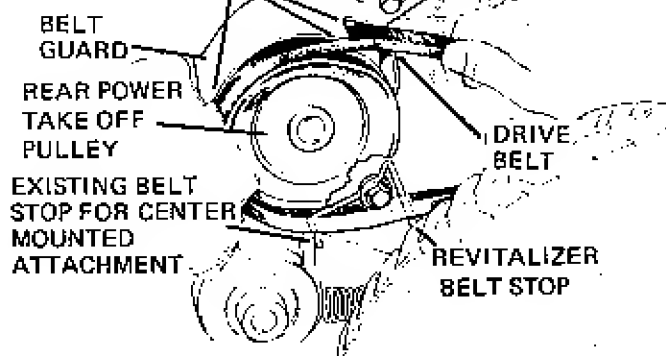


FIGURE 4

7. (See figure 5) If the mower is to be used with the revitalizer, remove the lift chain or cable from the tractor lift arm when operating. This is especially beneficial in reducing lifting effort on tractors not equipped with power lift since the revitalizer should be raised when turning to prevent excess lawn damage. It is not advisable to raise the mower when turning if the mower is engaged since operating the mower in the raised position will reduce the life of the mower drive belt.

8. Prior to first use or if the revitalizer has not been used recently, all adjustments listed in the Adjustments section of this manual except the drive chain adjustment should be checked before operating the revitalizer.

## OPERATION

The Simplicity Lawn Revitalizer is most effective if used in the Spring and Fall of the year. In the Spring its use will lift out thatch that harbors fungus and create a miniature irrigation system so that the water, fertilizer and air can reach the grass roots. Use the Revitalizer once in the Spring between the time the grass has started to grow vigorously and the time when summer weather might be expected to slow grass growth.

Used in the fall, the revitalizer will raise the summer's accumulation of thatch and create a series of grooves which permit frost to expand the soil for greater porosity. The grass roots will have a better chance to expand during the next growing season.

For best results the grass should be mowed to a length of about 2 inches before the revitalizer is used. This will prevent long grass from interfering with the revitalizing process.

### Depth Adjustment

**CAUTION: ALWAYS INSURE THE TRACTOR ENGINE IS STOPPED BEFORE ATTEMPTING TO ADJUST OR WORK AROUND THE REVITALIZER.**

(See figure 6) Adjust the depth with the Revitalizer in the lowered position. The cutting depth of the revitalizer knives may be precisely adjusted by turning the T handle at the rear of the revitalizer clockwise to raise the knives and counter clockwise to lower them. For use in Spring and Fall as recommended, the knives should be set about 1/2 inch deep. The 1/2 inch depth may be set quite easily and accurately on a level surface by placing a 1/2 inch block under each of the revitalizer guide wheels. **BE SURE THE TRACTOR ENGINE IS STOPPED.** With the revitalizer clutch disengaged for ease of turning, alternately rotate the drive pulley on the revitalizer and turn the depth adjusting handle until the ends of the knives just hit the ground surface. The revitalizer should now be set at 1/2 inch cutting depth. The grooves in the ground may also be checked after operating a short distance to insure the correct depth setting.

### Preparation for Operating

With the revitalizer (and mower if attached) disengaged and in the raised position, move to the area to be revitalized. The

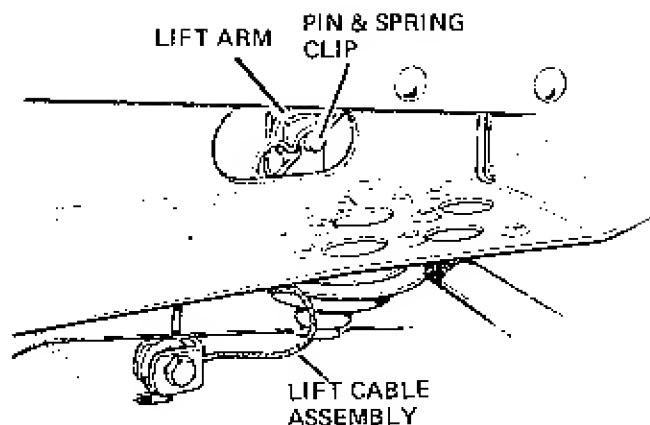


FIGURE 5

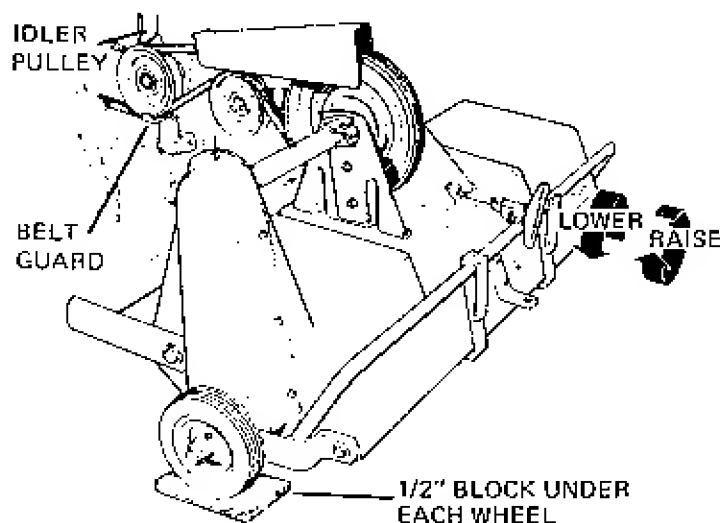


FIGURE 6

mower may be used with the revitalizer if the grass is not long or wet as to require full engine power for mowing. When using the revitalizer it should be raised when turning to prevent excessive uprooting of grass, but it is neither advised nor necessary to raise the mower. This may best be accomplished by disconnecting the mower lift cable from the lift lever by removing the spring clip and pin. See step 7 of Installation instructions.

### Engaging the Revitalizer

(See figure 7) The Revitalizer drive is engaged by pulling forward on the clutch lever mounted on the revitalizer. This can be done from the tractor seat simply by reaching around and pulling the clutch ahead. The revitalizer will be disengaged if the lever is pushed back, away from the tractor.

### Travel Speed and Direction

The revitalizer should be used with the tractor engine at 3/4 to full speed. Operating conditions will determine the best ground speed. Under normal conditions where the ground is smooth and soft a speed of 2 to 4 miles per hour should be satisfactory. This speed range will be approximated using 2nd gear of the variable speed transmission or 1/3 to 1/2 speed

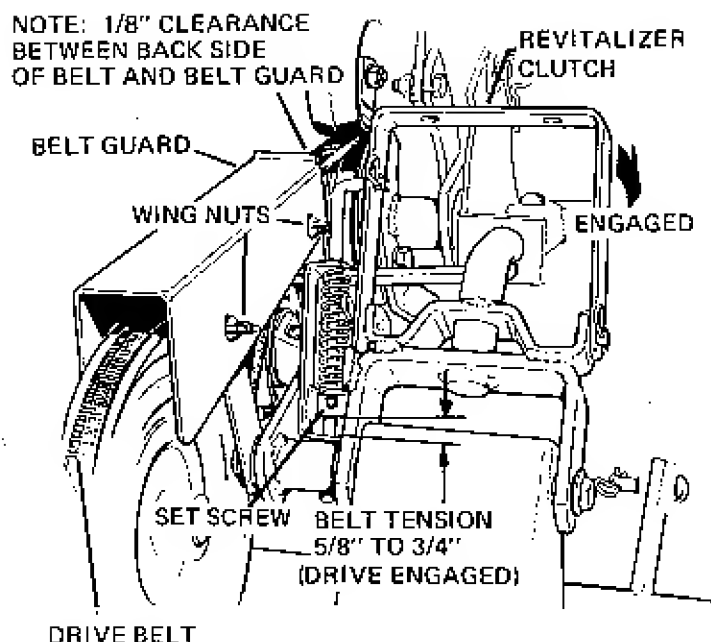


FIGURE 7

with the Hydrostatic Transmission. If the ground is hard, rocky or rough a slower speed may be advisable since the revitalizer will not be as effective under these conditions.

Travel the long direction of the lawn to minimize turns. Before turning, raise the revitalizer to prevent excessive uprooting of grass. On the second and successive passes, be sure to drive so the revitalizer slightly overlaps that portion of the lawn already revitalized.

**NOTE: DO NOT MAKE SHARP TURNS WITH UNIT IN GROUND, SINCE THIS WILL CAUSE LAWN DAMAGE.**

If wire or other foreign material get caught in the revitalizer, stop the tractor and disengage the clutch immediately. **STOP THE TRACTOR ENGINE BEFORE ATTEMPTING TO WORK AROUND THE REVITALIZER.**

## ADJUSTMENTS

### Belt Tension Adjustment

(See figure 7) Tension on the revitalizer drive belt is regulated by the position of the set collar in the rod guide assembly of the revitalizer clutch. Belt tension is correct when there is 5/8" to 3/4" clearance between the set collar and the lower end of the rod guide assembly when the revitalizer clutch is engaged. To increase belt tension, disengage the revitalizer clutch and loosen the set screw in the collar. Move the rod down slightly to reposition it under the set collar and retighten the set screw. Check the clearance by engaging the revitalizer clutch. Do not operate the revitalizer with more than 3/4 inch clearance between the set collar and rod guide as the excessive tension may cause premature belt and bearing failure.

### Preparing a Seedbed

The revitalizer may be used to prepare a seedbed for reseeding a sparse area by making a second pass diagonally to the first one at about a 45° angle. Use a depth setting of approximately 1/2 inch.

### Removing the Thatch

Dead grass and thatch should be removed after using the revitalizer. A Simplicity vacuum collector system is excellent for this purpose. For best results allow the thatch and grass to dry for a few hours before using the vacuum collector. A sweeper will also work well in removing the thatch.

### Trouble Shooting

If the thatch is not being lifted effectively:

1. Ground speed may be too fast - use a lower ground speed.
2. Engine speed may be too slow - operate the engine at 3/4 to full throttle.
3. Long grass may be interfering - grass should be cut to about 2" before revitalizing.
4. The revitalizer drive belt may be slipping - check the belt tension to be sure it is set correctly, see Adjustments. Page 5.

If thatch removed is not uniform or an unusual amount of green grass is being torn up:

1. Check to see if wire, sticks, etc. are caught on the knives.
2. Check the depth of the grooves in the ground. A depth of 1/2 inch is correct under most conditions.

If the drive belt will not stop turning when the revitalizer is disengaged:

1. The belt guide may be out of adjustment. See "Adjustments." Page 5.
2. The belt tension adjustment at the revitalizer clutch may be out of adjustment. See "Adjustments." Page 5.
3. The belt may be of the wrong length or construction - use only the correct Simplicity belt.

### Belt Stop Adjustment

If the revitalizer will not disengage properly or the backside of the drive belt shows wear, the belt stop or belt guards may need adjusting. Adjustment should be checked at three locations as follows:

**CAUTION: DO NOT ATTEMPT TO MAKE ANY ADJUSTMENTS WITH THE TRACTOR ENGINE RUNNING.**

(See figure 8) Check and adjust if necessary, the belt stop located to the rear of the Power-take-off drive pulley:

1. With the tractor engine stopped, engage the revitalizer drive clutch.

NOTE: CLEARANCE  
BETWEEN PULLEY  
AND BELT GUARD

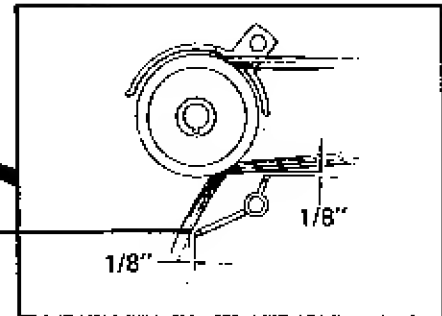
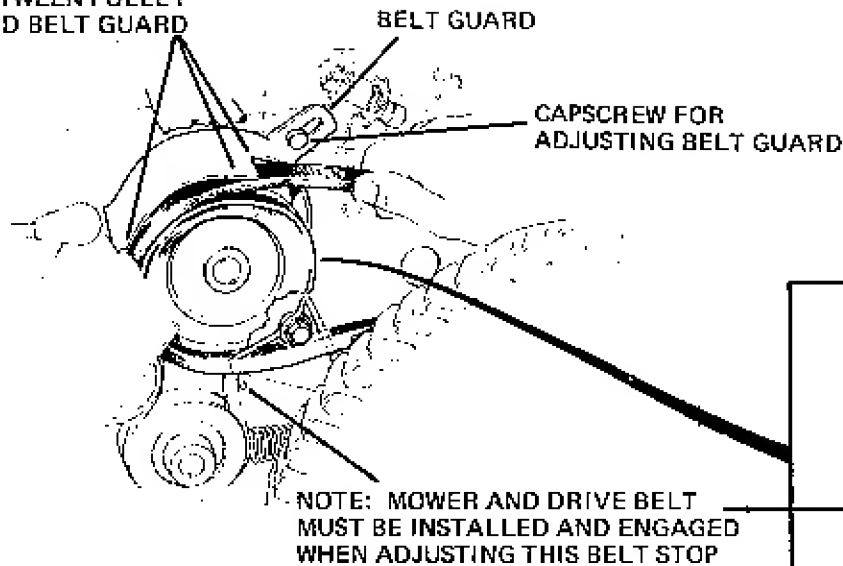


FIGURE 8

2. The capscrew which holds the revitalizer belt stop also holds the belt stop for the center mounted attachment Power-take-off drive belt. Since the Power-take-off belt stop can only be accurately adjusted to 1/8" clearance when the mower is attached and the drive belt installed, it is advisable to mark the location of the belt stop on the tractor frame by drawing a line along side of it with a marker. If it should move during the adjustment of the revitalizer drive belt stop, the reference line can be used to relocate it accurately.

3. While holding the capscrew with a wrench so it will not turn, loosen the nut located inside the tractor frame just enough so the belt stops can be moved.

4. Adjust the belt stop so there is 1/8" clearance between it and the revitalizer drive belt.

5. To prevent the belt stops from moving, use a wrench to hold the capscrew from turning while tightening the nut inside the frame securely.

(See figure 4) The guard over the drive pulley will not often need adjustment, but should be checked and adjusted if necessary so there is clearance between the guard and the top of the pulley. This guard may be adjusted by loosening the capscrew which fastens it to the tractor.

(See figure 7) The belt guard mounted over the revitalizer drive belt should be adjusted so there is at least 1/8" clearance between the guard and the belt when the revitalizer clutch is engaged to assure the backside of the belt does not rub against the guard. If it is necessary to adjust the guard, loosen the two wingnuts and reposition the guard correctly.

#### Drive Chain Adjustment

If inspection reveals that there is slack in the drive chain or it must be replaced, use the following procedure to tighten the chain:

1. (See figure 9) With the chain cover removed so the chain is visible, loosen, but do not remove the two bolts holding each end of the bearing housing.

2. Pull upward on the bearing housing until all slack is removed from the chain. Before tightening the bolts at each end of the bearing housing, insure that the bearing housing is parallel to the revitalizer housing. This may be easily and accurately done by measuring the distance from the bearing housing to the revitalizer housing at each end of the bearing housing. When the two distances are equal, the bearing housing is parallel to the revitalizer housing. (See figure 9).

After insuring all slack has been removed from the chain and the bearing housing is parallel to the revitalizer housing, tighten the two adjustment bolts at each end of the bearing housing securely.

Put a liberal coating of automotive grease on the chain and replace the chain cover.

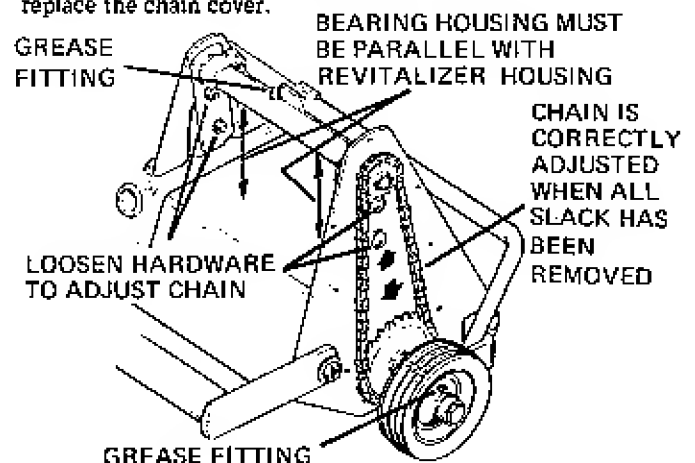


FIGURE 9

## MAINTENANCE

### Replacement Parts

Use only genuine Simplicity replacement parts. Be prepared to give your Simplicity dealer the Manufacturing number and Serial number listed on the identification plate shown below.



**CAUTION:** ALWAYS BE SURE THE TRACTOR ENGINE IS STOPPED BEFORE ATTEMPTING TO WORK AROUND THE REVITALIZER.

### After Each Use

Each time the revitalizer is used the knives should be checked for wire or other material which may be caught in them. Clean any foreign material away from the knives for best operation.

### Every 10 Hours

There are five grease zerks located on the revitalizer which should be lubricated with automotive grease after every 10 hours of use. They are located one on each of the two guide wheels, one on each of the two tine shaft bearings and one on the crossdrive housing. (See figure 9 and 10.) Lubricate each zerk with 5 shots of grease or until grease is pushed out around the bearings.

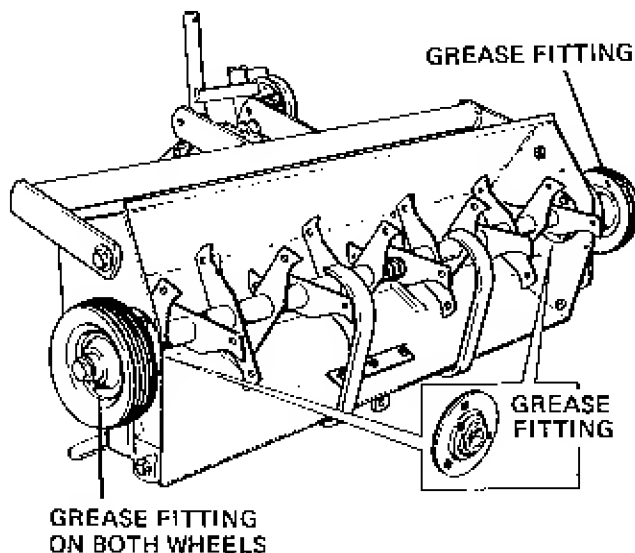


FIGURE 10

Lubricate all pivot points with engine oil to help prevent wear. (See figure 11) Do not get oil on the drive belt or the pulleys.

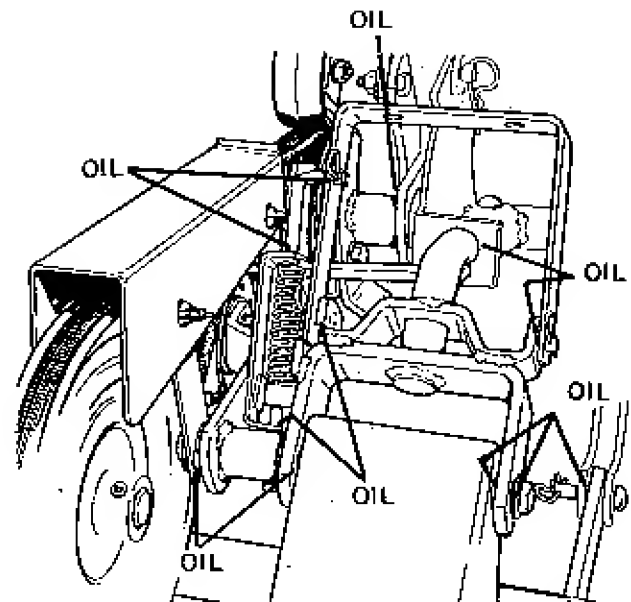


FIGURE 11

### Once Each Year

Once a year remove the chain cover on the left side of the revitalizer housing and inspect the chain. If the chain shows excessive wear, it should be replaced. See your Simplicity dealer for the correct chain.

If the chain is loose it should be tightened until all slack is removed. (See Adjustments).

Coat the chain liberally with automotive grease and replace the cover.

### Belt Replacement

If the revitalizer drive belt should become excessively frayed or twisted or break and replacement is necessary, do the following:

1. Be sure the tractor engine is not running.
2. Place the revitalizer clutch in the disengaged position.
3. (See figure 7) Remove the two wingnuts holding the belt guard in place over the drive belt. Remove the belt guard.
4. (See figure 6) Remove the belt guard and idler pulley from the reverse idler assembly and replace the damaged belt with a new Simplicity belt.
5. When replacing the belt guard, position it so the belt will not rub against it when the revitalizer is operated.
6. (See figure 7) Place the new belt over the revitalizer pulley and replace the belt guard.

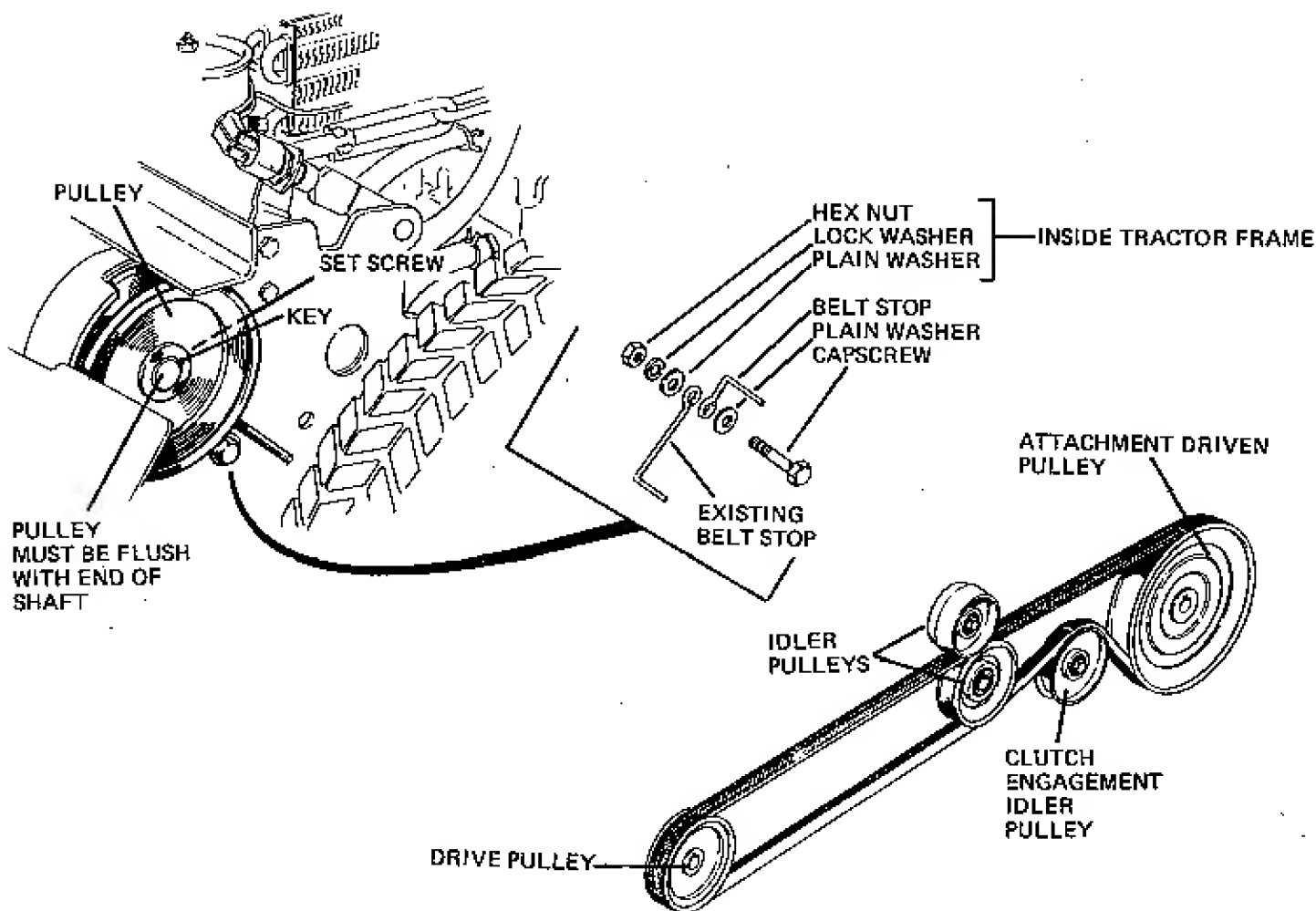
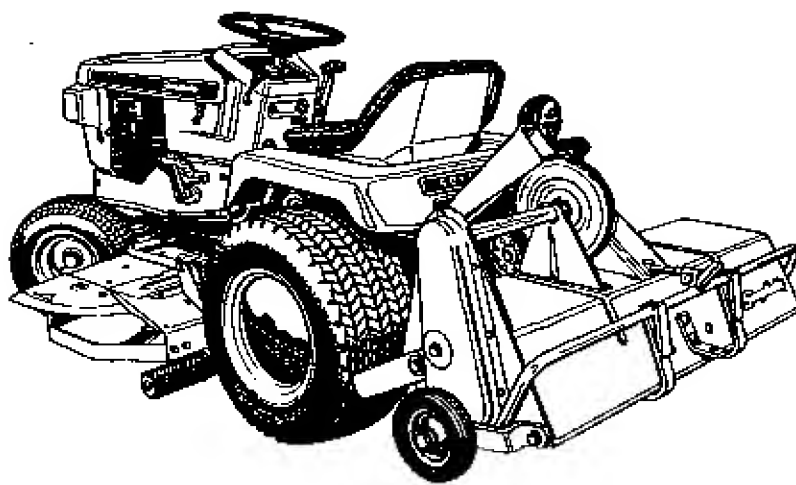


FIGURE 12

7. (See figure 12) Check the Power-take-off pulley on the tractor to be sure it is properly installed with the hub facing in toward the tractor and the outer edge flush with the shaft. The key must be in place and the setscrew on the pulley hub tightened securely.

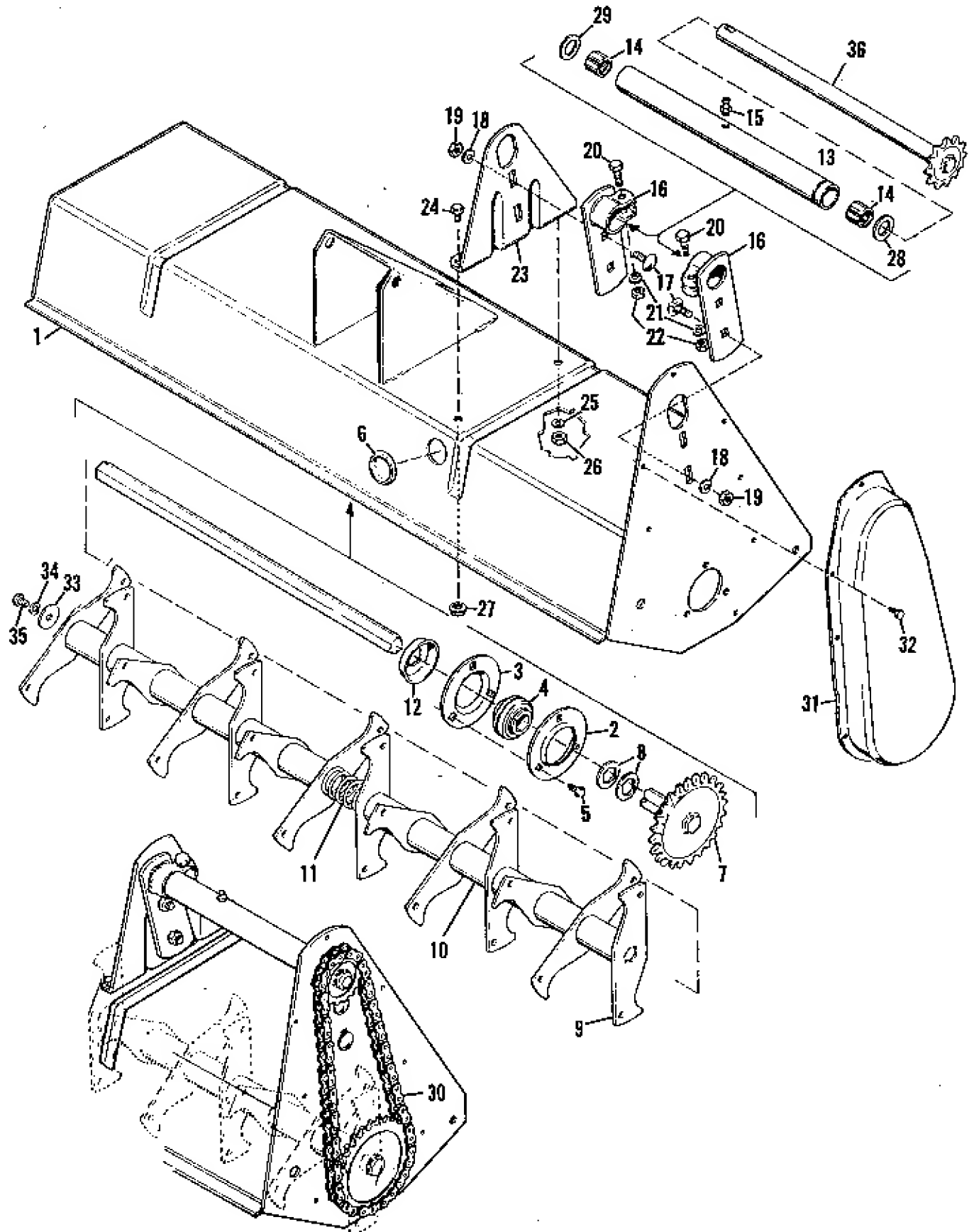
8. Install the belt over the Power-take-off pulley and check all adjustments listed in the Adjustments section except the drive chain adjustment.





## **Parts Listing**

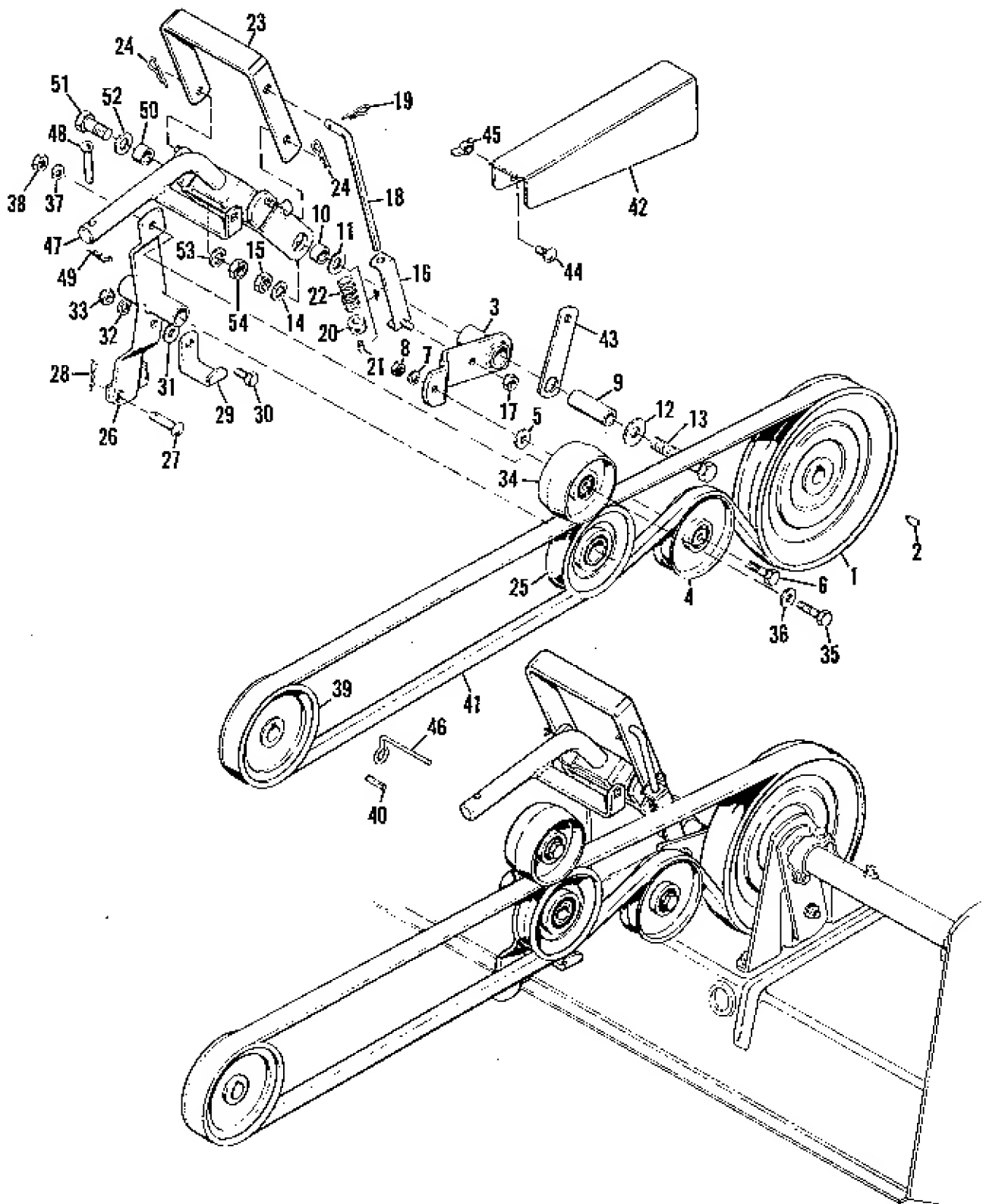
# HOUSING, TIME AND DRIVE



# HOUSING, TINE AND DRIVE

Ref. No.	Part No.	Qty. Req.	Description
1	172307	1	Housing Assembly
2	172972	2	Bearing Flange
3	172973	2	Bearing Flange
4	172347	2	Bearing
5	715083	6	Hex Hd. Swageform Screw, 5/16"-18 x 1/2" lg.
6	172934	1	Plug Button
7	172338	1	Tine Shaft Assembly
8	172332	4	Washer (Hex)
9	170333	14	Tine
10	170337	12	Spacer
11	170417	1	Spring
12	172874	2	Trash Guard
13	172906	1	Bearing Housing
14	172747	2	Needle Bearing
15	727013	1	Grease Fitting
16	172895	2	Clamp Support Assembly
17	702025	4	Carriage Bolt, 7/16"-14 x 1" lg.
18	720006	4	Lock Washer, 7/16"
19	717022	4	Hex Jam Nut, 7/16"-14
20	705018	2	Hex Capscrew, 5/16"-18 x 1-1/2" lg.
21	720001	2	Lock Washer, 5/16"
22	717001	2	Hex Nut, Full, 5/16"-18
23	172252	1	Bearing Support
24	705012	2	Hex Capscrew, 5/16"-18 x 5/18" lg.
25	720001	1	Lock Washer, 5/16"
26	717001	1	Hex Nut, Full, 5/16"-18
27	718033	1	Special Nut, 5/16"-18
28	106069	1	Washer
29	101022	1	Washer
30	172891	1	Chain
31	172983	1	Chain Guard
32	715067	8	Taptite Screw, 1/4"-20 x 3/8"
33	123144	1	Washer
34	720001	1	Lock Washer, 5/16"
35	705026	1	Hex Capscrew, 5/16"-18 x 1/2" lg.
36	172340	1	Drive Shaft Assembly

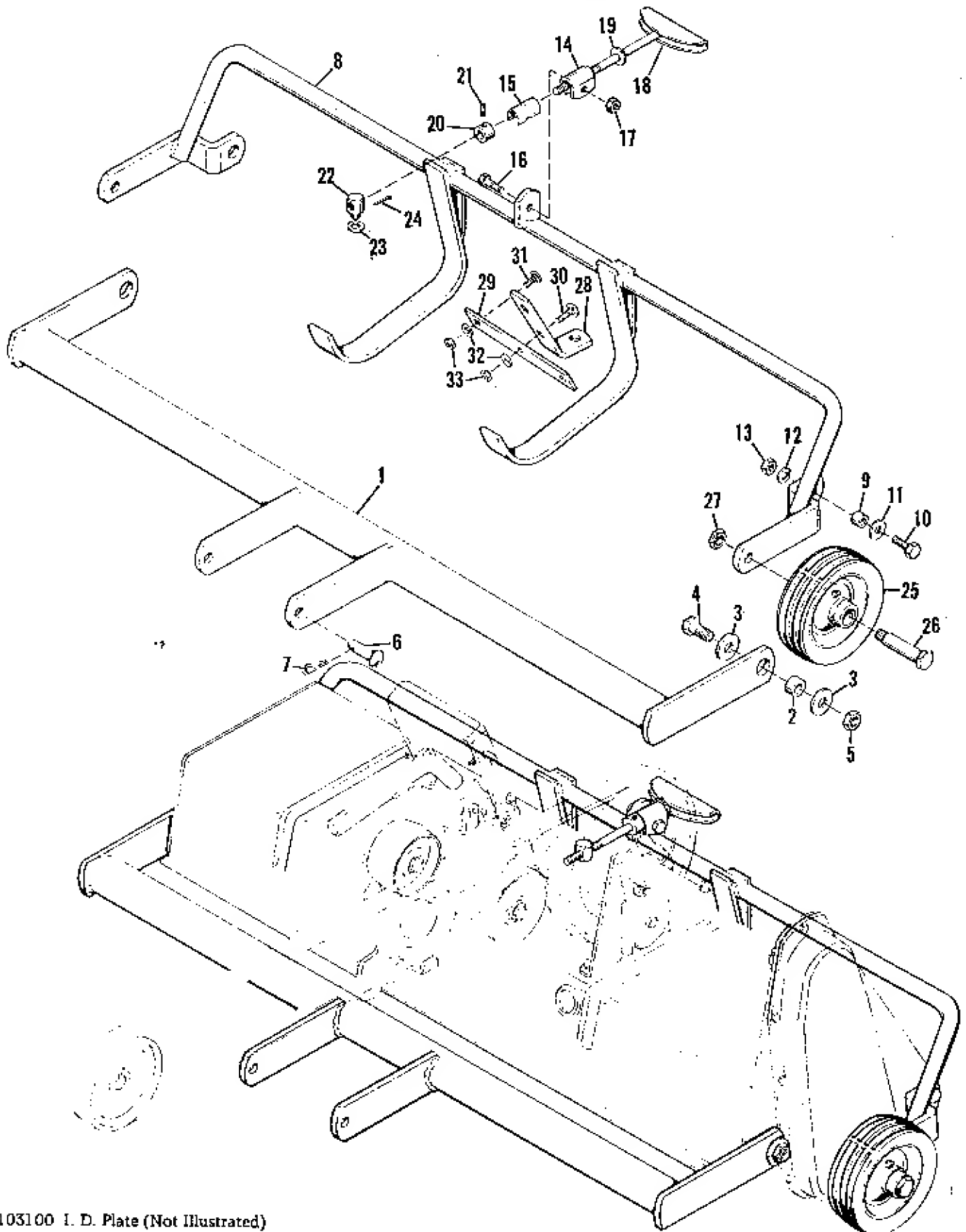
# CLUTCH AND BELT DRIVE



# CLUTCH AND BELT DRIVE

Ref No.	Part No.	Qty. Req.	Description
1	105302	1	Pulley
2	725003	1	Key
3	105295	1	Clutch Lever Assembly
4	105306	1	Idler Pulley
5	719002	1	Plain Washer, 5/16"
6	705016	1	Hex Capscrew, 3/8"-16 x 1-1/4" lg.
7	720002	1	Lock Washer, 3/8"
8	717003	1	Hex Nut, Full, 3/8"-16
9	105339	1	Spacer
10	105346	1	Spacer
11	719001	1	Plain Washer, 3/8"
12	719003	1	Plain Washer, 7/16"
13	715093	1	Hex Capscrew, 7/16"-14 x 3-1/2" lg.
14	720006	1	Lock Washer, 7/16"
15	717022	1	Hex Nut, Jam, 7/16"-14
16	158406	1	Rod Guide Assembly
17	717511	1	Hex Nut, Full Lock, 5/16"-18
18	105343	1	Clutch Rod
19	106787	1	Spring Clip
20	8191022	1	Set Collar
21	713001	1	Sq. Hd. Set Screw, 1/4"-20 x 3/8" lg.
22	162065	1	Spring
23	105303	1	Clutch Handle
24	106787	2	Spring Clip
25	105380	1	Idler Pulley
26	105322	1	Idler Arm Assembly
27	105306	1	Pin
28	106787	1	Spring Clip
29	105351	1	Belt Guard
30	705031	1	Hex Capscrew, 3/8"-16 x 7/8" lg.
31	719002	1	Plain Washer, 3/8"
32	720002	1	Lock Washer, 3/8"
33	717003	1	Hex Nut, Full, 3/8"-16
34	164083	1	Idler Pulley
35	705016	1	Hex Capscrew, 3/8"-16 x 1-1/4" lg.
36	719002	1	Plain Washer, 5/16"
37	720002	1	Lock Washer, 3/8"
38	717003	1	Hex Nut, Full, 3/8"-16
39	164202	1	Drive Pulley
40	8061081	1	Key
41	105340	1	"V" Belt
42	105326	1	Belt Guard
43	105359	1	Belt Guard Support
44	703005	2	Carriage Bolt, 5/16"-18 x 3/4" lg.
45	718006	1	Wing Nut, 5/16"-18
46	167032	1	Belt Stop
47	105329	1	Lift Bar Assembly
48	118053	1	Pin
49	106787	1	Spring Clip
50	105346	1	Spacer
51	705042	1	Hex Capscrew, 7/16"-14 x 1-1/4" lg.
52	719001	1	Plain Washer, 3/8"
53	720006	1	Lock Washer, 7/16"
54	717022	1	Hex Nut, Jam, 7/16"-14

# HITCH AND HEIGHT ADJUSTMENT



103100 I. D. Plate (Not Illustrated)

# HITCH AND HEIGHT ADJUSTMENT

Ref. No.	Part No.	Qty. Req.	Description
1	172260	1	Hitch Assembly
2	105386	2	Spacer
3	719004	4	Plain Washer, 1/2"
4	705049	2	Hex Capscrew, 1/2"-13 x 1-1/4" lg.
5	717518	2	Hex Nut, Full Lock, 1/2"-13
6	155037	2	Pin
7	106787	2	Spring Clip
8	172271	1	Adjuster Assembly
9	118335	2	Spacer
10	705016	2	Hex Capscrew 3/8"-16 x 1-1/4" lg.
11	719001	2	Plain Washer, 3/8"
12	720002	2	Lock Washers, 3/8"
13	717003	2	Hex Nut, Full, 3/8"-16
14	152050	1	Rod Guide
15	121175	1	Guide Liner
16	705019	1	Hex Capscrew, 5/16"-18 x 1-1/4" lg.
17	717511	1	Hex Nut, Full Lock, 5/16"-18
18	108415	1	Adjusting Screw Assembly
19	719001	1	Plain Washer, 3/8"
20	105201	1	Set Collar
21	713505	1	Set Screw, 1/4"-20 x 5/16" lg.
22	108172	1	Pivot
23	719002	1	Plain Washer, 5/16"
24	722001	1	Cotter Pin, 3/32" x 3/4" lg.
25	172676	2	Wheel & Tire Assembly
26	172682	2	Wheel Bolt
27	717519	2	Hex Nut, Full, Lock, 7/16"-14
28	172317	1	Tow Bar
29	172316	1	Tow Bar Reinforcer
30	702024	1	Carriage Bolt, 5/16"-18 x 1" lg.
31	702015	3	Carriage Bolt, 5/16"-18 x 3/4" lg.
32	720001	4	Lock Washer, 5/16"
33	717001	4	Hex Nut, Full, 5/16"-18
34	103031	1	Decal (Safety) Not Illustrated
35	153166	1	Decal (Simplicity) Not Illustrated

